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Hendricus Antonius Hoogland

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EXAMINER

MALEKZADEH, SEYED MASOUD

ART UNIT

PAPER NUMBER

1743

MAIL DATE

DELIVERY MODE

11/24/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|---|--|
| Office Action Summary | Application No. 10/533,938 | Applicant(s) HOOGLAND, HENDRICUS ANTONIUS | |
| | Examiner Seyed M. Malekzadeh | Art Unit 1743 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 20-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 20-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/28/2008 has been entered.

Response to Amendment

Claims **1- 13 and 20- 23** are **rejected**.

Claims **14- 19** are **cancelled**.

Claims **21- 23** are newly **added** claim.

Claims **1 and 7** are **amended**.

In view of the amendment, filed on 12/21/2009, following **rejections** are **withdrawn** from the previous office action.

- Rejection of claim 20 under 35 U.S.C. 112, first paragraph
- Rejection of claims 1- 6 and 10- 12 under 35 U.S.C. 103(a) over Lovejoy et al (US 3,905,740) in view of Kumazaki (JP 57-115,330)
- Rejection of claims 1- 9, 11- 13, and 20 under 35 U.S.C. 103(a) as being unpatentable over Theysohn et al. (US 4,025,022) in view of Kumazaki (JP 57-115330)

New Grounds of the Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

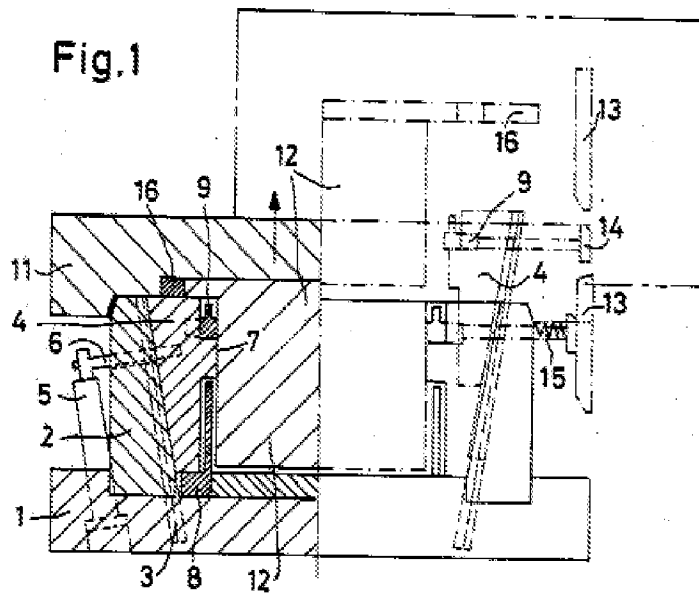
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1- 9, 11- 13, 20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Theysohn et al. (US 4,025,022) in view of Nakajima (US 5,149,479)

Theysohn et al. (US '022) teach a die mold for the manufacturing of the crate-like double walled containers comprising a base plate (1), supporting flanges (2) , movable lateral wedges (4), guides (3) which are situated at a sharp angle to the vertical and the contact surfaces of the

Art Unit: 1743

lateral wedges (4) and having a corresponding inclination, hydraulic cylinder (5) for moving lateral wedges (4) which are arranged parallel to slanting guide (3) and is coupled by means of connecting bolt (6) to inner lateral wedge (4). Each of the lateral wedges (4) is provided with a projection (7) extending into the mold cavity which serves to create a recess in the respective lateral wall of the container. Further, four base central cores (8) are extended from the base plate (1) between the corners of the mold cavity. (See column 2, lines 19- 46)



Theysohn et al. (US '022) also teach the apparatus include another mold part (11) including a top base plate (11) and massive inner core (12) secured thereto which extend into the hollow area defined by lateral wedges (4). Core (12) has projections on its under side as well as grooves which are in connection with a corresponding profiling of the bottom

Art Unit: 1743

base plate (1) which form an interrupted structure in the crate bottom or base. (See column 2, lines 47- 59)

Further, according to Theysohn et al. (US '022), when the mold is closed, sliders (9) are pressed by a cam (13) through compression plate (14) on slider (9) against the urging of the spring (15) in an inwardly direction. During the mold opening procedure, however, cam (13) passes compression plate (14) simultaneously with the motion of inner core (12). The length of the cam (13) is dimensioned so that following the backward motion of the sliders (9) away from compression plate (14) and thus releases slider (9) for movement in the outward direction. This movement is caused by the force of spring (15). (See column 4, lines 31- 42)

Further, when the mold is closed, the slider (9) is positioned within the mold cavity. Cam (13) bears against the compression plate (14) and is coupled to inner core (12) and slider (9) is brought into position by means of compression plate (14). In opening the mold, inner core (12) is pulled out and cam (13) simultaneously moves upwardly. Slider (9) moves along line (19) while it is still in the molded container.

Theysohn et al. (US '022) disclose when the mold is closed, the slider (9) is positioned within the mold cavity. Cam (13) bears against compression plate (14) and is coupled to the inner core (12) and the slider (9) which is brought into position by means of compression plate (14). In opening the mold, the inner core (12) is pulled out and cam (13)

Art Unit: 1743

moves upwardly. The slider (9), on the other hand, moves along line (19) while still in the molded container. (See column 5, lines 9- 17)

Therefore, as to **claim 1**, Theysohn et al. (US '022) teach a mold for manufacturing crates comprising at east two mold parts (1 and 11) moveable relative to each other in a first direction of the movement in which the two mold parts in the closed position form a mold cavity and the mold cavity provide on four sides with a slidable wall part (4) moveable in a second direction of the movement within the mold cavity and the slide-able wall part (4) is also movable between a first, retracted position and a second position which moves forward while the mold cavity with the wall part (4) in the second position is in a product forming position and the wall part (4) in the first position has a volume greater than with the wall part in the second position.

Further, as to **claim 7**, Theysohn et al. (US '022) teach a first mold part (11) including a central first core part (12), a second mold part (1) movable with respect to the first mold part in a first direction of movement in which the second mold part includes a second core part (8) disposed at a distance from the central first core part (12) when the mold is in a closed position, and the second core part (8) have a first side and a second side which is opposite to the first side, in such a way that the first side has a face toward the central core part (12), and the second side has a face away from the central first core part, and at least one wall part (4) moves toward the central first core part (12) in a second direction of

Art Unit: 1743

the movement between a retracted position as a first position and an extended position as a second position wherein the second direction of the movement being substantially perpendicular to the first direction of movement; further, the central first core part (12), the second core part (8), and the moveable wall part (4) define a mold cavity in which the mold cavity having a product forming volume that when the movable wall (4) is in the extended position has a greater volume than when the moveable wall part is in the retracted position. Furthermore, the central first core part (12) and the movable wall part (4) are disposed on the opposite first and second sides of the second core part (8) such that the movable wall part (4) faces the second side of the second core part (8) and facing away from the central first core part (12); also, the second direction of the movement for the respective wall part (4) is directed towards the second core part (8) while the mold cavity is designed such that when the moveable wall part (8) is in the retracted position, a flow path for plastic is defined between the central core part (12) and the second core part (8) and the moveable wall part (4).

However, Theysohn et al. (US '022) **fail to teach** the slid-able wall part also is movable within the mold cavity in a closed mold position after injection of plastic into the mold cavity, as claimed in **claim 1**. Also, Theysohn et al (US '022) **fail to teach** the moveable wall part is capable to move toward the central portion of the mold cavity in the closed

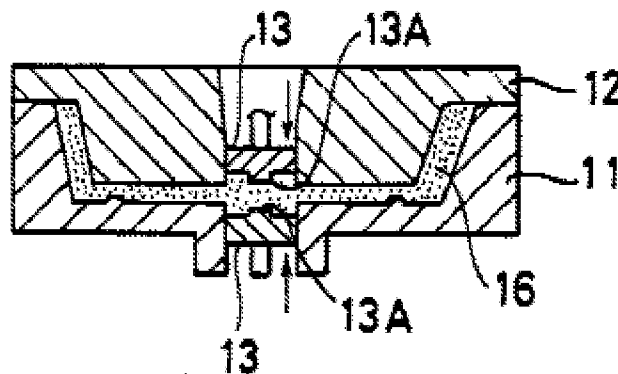
Art Unit: 1743

position after injection of plastic into the mold cavity, as claimed in

claim 7.

In the analogous art, Nakajima (US '479) teaches an apparatus for manufacturing a modular cover of air bag in which the apparatus comprises a lower die (11), an upper die (12) in which the core die (12) is provided at a position where a tear-line is formed on the material, with two movable elongated member die pieces (13), which are capable of moving toward and away from the mold cavity positioned in the lower and upper dies (11 and 12) wherein each of the die pieces (13) includes a projection (13A). (See column 3, lines 13- 27 and column 4, lines 1- 10)

FIG. 6



Further, Nakajima (US '479) discloses first the molding dies (11 and 12) get in the closed position, and then, the movable members (13) in both sides withdraw from the cavity of the mold to form extra spaces adjacent the cavity. Thereafter, a resin material (16) is injected into the cavity of the mold to fill the cavity with the resin material (16), and then,

Art Unit: 1743

moving the respective movable members (13) toward the central portion of the cavity to position where the flat side faces on both sides of the respective elongated projections are flush with the respective outer surfaces of the cavity and the elongated projections project into the cavity so that tear-lines are formed in the resin material supplied into the mold cavity and the resin material in the extra spaces is supplied to an area around the tear-lines with compression to provide enough density at the area around the tear-lines. (See column 4, lines 12- 38)

Therefore, as to **claims 1 and 7**, Nakajima (US '479) teaches the slid-able wall parts (13) are movable within the mold cavity in a closed mold position after injection of the plastic (16) into the mold cavity in such a way that when the slide-able wall parts move toward each other compress the resin material (16) within the mold cavity.

Therefore, **it would have been obvious** for one of ordinary skill in the art at the time of applicant's invention to modify the mold apparatus as taught by the disclosure of Theysohn et al (US '022) through **providing** a movement of the slid-able wall parts within the mold cavity in a closed mold position in a way that the wall parts are able to move towards the central portion of the mold cavity after injection of plastic into the mold cavity **in order to** improve the workability of the apparatus to suppress the formation possibility of blow marks or tear lines in the formed product, as suggested by Nakajima (US '479)

Furthermore, as to **claims 2- 3 and 5**, Theysohn et al (US '022) teach a first direction of movement in which the two mold parts (1 and 11) move toward and away from each other and a second direction of movement in which the slide-able walls (4) extend or retract from each other wherein the first and the second directions of the movement include an angle of 90° and therefore, the first and the second direction of movement, provide a right angle.

Further, Theysohn et al (US '022) disclose four lateral wedges which are movable upwardly and downwardly at a sharp angle to the vertical during opening and closing of the mold. (See column 6, lines 1-3) Therefore, as to **claim 4**, Lovejoy et al ('740) disclose four separate and independently moveable wall parts, which are provided in the mold cavity, move independently of each other by linkages, and further, as to **claim 6**, at four sides of the core part (12), a moveable wall part (4) is provided.

Also, Theysohn et al (US '022) teach the mold cavity is designed for forming a holder and having a bottom surface (1) and a longitudinal wall (8) extending away from the bottom surface (1) in which the bottom surface (1) and the longitudinal wall (8) include a thickness which is smaller than the height of longitudinal wall (8), and the bottom wall (8) is positioned at right angle in respect to the bottom surface, while the height of the longitudinal wall (8) is greater than the dimension of the

Art Unit: 1743

bottom surface, as claimed in **claim 8**. (See column 3, lines 19- 59; figure 1)

Further, Theysohn et al (US '022) teach at least one longitudinal wall forming part of the mold is arranged for forming a cavity in the longitudinal wall (8) while a moveable wall part (4) is designed for forming at least one wall of the cavity (see figure 1), as claimed in **claim 9**.

Further, Theysohn et al (US '022) teach lateral wedges (4) are driven by means of hydraulic motor means (5) which are arranged substantially parallel to slanting guide (3) and are coupled by means of connecting bolt (6) to inner lateral wedge (4). (See column 3, lines 31- 34) Further, as to **claim 11**, Theysohn et al (US '022) teach for each movable wall part (4), a movable wall part drive mean (5) is provided.

Theysohn et al (US '022) also teach when the mold is closed, sliders (9) are pressed by a cam (13) through compression plate (14) on slider (9) against the urging of spring (15) in an inwardly direction. During the mold opening procedure, however, cam (13) passes compression plate (14) with the motion of the inner core (12). (See column 4, lines 31- 36) As to **claim 12**, Theysohn et al (US '022) teach a horizontal hydraulic molding (5), as a pressing device, wherein the first direction of movement is parallel to the pressing direction of the pressing device. Further, as to **claim 13**, each moveable wall part (4) is moveable independently of the pressing device.

Further, as to **claim 20**, the central first core part (12), the second core part (8), and the movable wall part (4) define a mold cavity. Moreover, as to **claim 23**, Theysohn et al (US '022) teach the second core part (8) of the second mold part (1) comprises a pin (7) extending from an upper side of the wall part (4) in which the pin (7) is received in the recess formed in the first mold part when the mold is in the closed position for supporting the second core part within the closed mold.

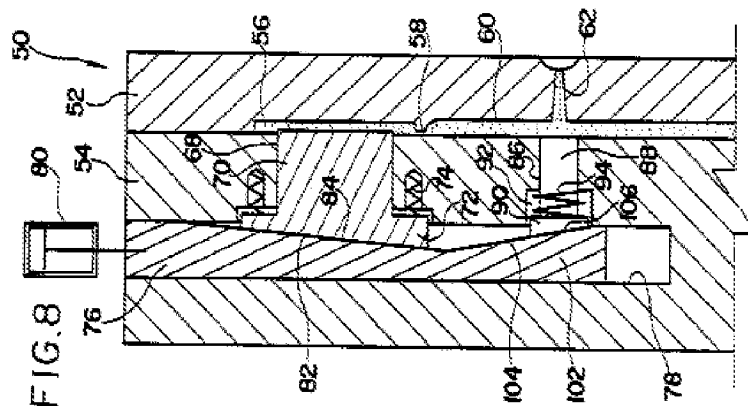
Claims 21- 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Theysohn et al. (US 4,025,022) in view of Nakajima (US 5,149,479), as applied to claims 1- 9, 11- 13, and 20 above, and further in view of Hatakeyama (US 4,980,115).

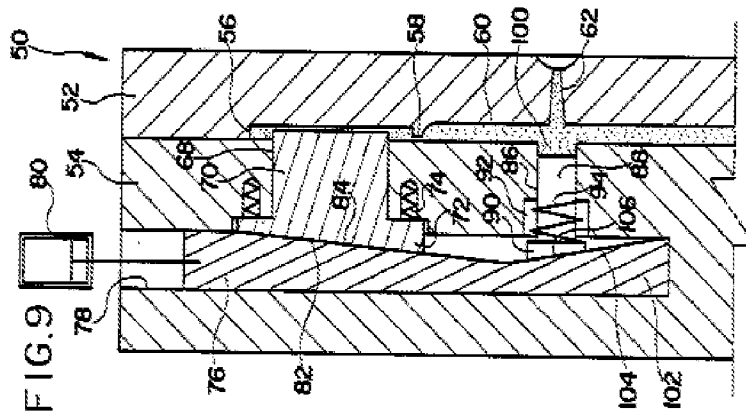
Theysohn et al. (US '022) in view of Nakajima (US '479) teach all the structural limitations of a molding apparatus as discussed above in the body of the rejection, **however, fail to teach** at least one moveable wall part comprises a first and a second inclined surfaces disposed on a rear side and the mold apparatus comprises a first and second wedges each having a first and second inclined surface cooperating with the first and second inclined surfaces of the moveable wall part, as claimed in **claims 21- 22.**

In the analogous art, Hatakeyama (US '115) teaches an injection molding apparatus (50) comprising a female die (52) and a male die (54) for defining a cavity (56) there-between, a guide hole (78) formed in the

Art Unit: 1743

male die (54) and extending perpendicularly to the hollow space (68), a slide block (70) having a flange (72) at the end opposite to the cavity (56), a rod (76) having a slant surface (82) which is in contact with a beveled end (84) of the slide block (70), an extension (102) having a second slant surface (104) which is inclined in a direction opposite to that of the first slant surface (82), a closure rod (88) which is positioned in a bore (86) with an enlarged portion (90) which is slide-ably and fluid-tightly fitted in the bore (86), wherein the flange (92) of the closure rod (88) also has a beveled end (106) complementary to and abutting against the second slant surface (104), wherein the downward movement of the rod (76) causes the slide block (70) to advance against the springs (74) while permitting the closure rod (88) to retract by the force of the spring (94), and a hydraulic cylinder (80) to move the rod (76) within the guide hole (78) formed in the male die (54) and extending perpendicularly to the hollow space (68). (See column 5, lines 23-68 and column 6, lines 1- 21 and figures 7-8)





Therefore, as to **claim 21**, Hatakeyama (US '115) teaches a mold apparatus (50) having a first and a second moveable wall part (70 and 88) in which the first moveable wall part comprises a first inclined surface (84) disposed in a first wedge (76) and a drive means (80) for translating the first wedge (76) in a direction parallel to the first direction of movement in which the first wedge (76) is slide-ably supported on a first running surface disposed on the second mold part in such a way that the first wedge (76) includes an inclined surface (84) cooperating with the first inclined surface of the moveable wall part for moving the wall part in the second direction of movement when the first wedge is translated by the drive means (80).

Further, as to **claim 22**, Hatakeyama (US '115) teaches at least one moveable wall part (90) comprises a second inclined surface (106) wherein the mold comprises a second wedge (102) which translates in a direction parallel to the first direction of the movement but opposite the direction movement of the first wedge (76) wherein the second wedge is slide-ably supported on a second running surface disposed on the

Art Unit: 1743

second mold part and the second wedge (88) includes an inclined surface (104) cooperating with the second inclined surface (106) of the moveable wall part (88) for moving the wall part in the second direction of the movement when the second wedge (102) is translated by the drive means (80) in which the drive means (80) simultaneously translate the first and the second wedges (70 and 88).

It would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the molding apparatus as taught by the combined teachings of Theysohn et al. (US '022) and Nakajima (US '479) through **providing** a first and a second inclined surfaces for at least one moveable wall part which is disposed on a rear side of the wall part and a first and second wedges each having a first and second inclined surfaces to cooperate with the first and second inclined surfaces of the moveable wall parts **in order to** improve the workability of the apparatus to efficiently slide the moveable wall parts simultaneously, as suggested by Hatakeyama (US '115)

Response to Arguments

Applicant's **arguments**, filed on 10/28/2010, with respect to the **claims 1- 13 and 20- 23** have been considered but **are moot** in view of the new ground(s) of the rejections.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 1743

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed M. Malekzadeh whose telephone number is (571)272-6215. The examiner can normally be reached on Monday to Friday 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Del Sole, can be reached on (571) 272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. M. M. /

Examiner, Art Unit 1743

/Joseph S. Del Sole/

Supervisory Patent Examiner, Art Unit 1743